

Antioch University

AURA - Antioch University Repository and Archive

Dissertations & Theses

Student & Alumni Scholarship, including
Dissertations & Theses

2015

Short-term Attachment Outcomes of Infants in the Child Welfare System

Tracy Markowitz

Antioch University - New England

Follow this and additional works at: <https://aura.antioch.edu/etds>



Part of the [Clinical Psychology Commons](#)

Recommended Citation

Markowitz, Tracy, "Short-term Attachment Outcomes of Infants in the Child Welfare System" (2015).
Dissertations & Theses. 256.

<https://aura.antioch.edu/etds/256>

This Dissertation is brought to you for free and open access by the Student & Alumni Scholarship, including Dissertations & Theses at AURA - Antioch University Repository and Archive. It has been accepted for inclusion in Dissertations & Theses by an authorized administrator of AURA - Antioch University Repository and Archive. For more information, please contact hhale@antioch.edu, wmcgrath@antioch.edu.

Running head: SHORT TERM ATTACHMENT OUTCOMES

Short-term Attachment Outcomes of Infants in the Child Welfare System

by

Tracy Markowitz

B.A., Boston University, 2008
M.S., Antioch University New England, 2012

Submitted in partial fulfillment of the requirements for the degree
of Doctor of Psychology in the Department of Clinical Psychology
of Antioch University New England, 2015

Keene, New Hampshire



Department of Clinical Psychology

DISSERTATION COMMITTEE PAGE

The undersigned have examined the dissertation entitled:

**SHORT-TERM ATTACHMENT OUTCOMES
OF INFANTS IN THE CHILD WELFARE SYSTEM**

presented on July, 27 2015

by

Tracy Markowitz

Candidate for the degree of Doctor of Psychology
And hereby certify that it is accepted*.

Dissertation Committee Chairperson:
George Tremblay, PhD

Dissertation Committee members:
Martha Straus, PhD
Jean Twomey, PhD

Accepted by the

Department of Clinical Psychology Chairperson
George Tremblay, PhD

on 7/27/2015

* Signatures are on file with the Registrar's Office at Antioch University New England.

Table of Contents

Abstract.....	1
Chapter 1: Introduction and Literature Review.....	2
Prenatal Substance Exposure is Prevalent in the United States.....	2
Maternal Drug Use Leads to Inconsistent Caregiving.....	2
Effects of Secure and Non-Secure Attachment.....	3
Child Welfare Services: CAPTA, DCYF, FTDC, and ASFA.....	3
Negative Sequelae of Prenatal Substance Exposure.....	5
Prenatal drug exposure does not directly impact attachment.....	5
Maternal Characteristics.....	6
Advent of Kinship Foster Care.....	7
Advantages of kinship care.....	7
Disadvantages of kinship care.....	8
Inequitable access to resources.....	8
Attachment comparisons.....	9
Ameliorating the Effects of Prenatal Insults with Postnatal Conditions.....	9
Effect of Foster Care on Attachment: Research Gaps.....	11
Hypotheses and Objectives.....	12
Chapter 2: Method.....	13
Participant Characteristics.....	13
Measures.....	14
Infant attachment.....	14
Placement frequency.....	16
Placement duration.....	16
Placement type.....	16
Procedures.....	16
Semi-Structured Interviews.....	17
Chapter 3: Results.....	18
Data Cleaning and Preparation.....	18
Descriptive Statistics.....	18
Statistical Power and Data Analysis.....	20

Hypothesis #1: Frequency of foster care placements will be inversely related to attachment security.....	21
Hypothesis #2: Kinship based versus non-kin foster care placements will be positively associated with secure attachment.....	21
Interviews with Experts in Foster Care.....	22
On placement frequency.....	22
On the relationship between placement type and attachment.....	22
Observed drawbacks of kinship care.....	23
Experienced inequity within support services.....	23
On what foster care factors support an infant’s healthy development.....	23
Flexibility.....	24
History.....	24
Biological caregiver involvement.....	24
Support.....	25
Chapter 4: Discussion.....	26
Findings.....	26
Preliminary interpretation.....	26
How Should These Results be Understood?.....	26
Broad Policy Recommendations.....	30
ASFA efficacy.....	31
Caveats surrounding confidentiality of infants in foster care.....	32
Access to support.....	32
Limitations.....	34
Data source limitations.....	34
Sample specificity.....	35
Reductive.....	35
Directions for Future Research.....	35
References.....	37
Appendix A.....	44
Appendix B.....	45

Acknowledgements

For the man who hung on by his fingernails and taught me:

That there are two ways to react, and to always make the choice to treat people generously

To never pay ATM fees, never skip the cheap laugh, and never touch the principal

That if you're going to sing off key, you should at least sing loudly

That the activity doesn't matter, it's just an excuse to be together

That the world is a kind place that accepts me with open arms

But also to say 'screw you' when the situation warrants

That sensitivity is a double-edged sword

That there is honor in a hard day's work

That my life is not just my life

Thank you for always being in my corner, my cheerleader, my umbrella, my Mickey

I love you, Daddy

more than life itself, forever and always

Abstract

Children with prenatal substance exposure are often born into families of low socio-economic status, low educational level, and with restricted access to health services. Pregnant substance-using mothers tend to reject, neglect, and generally misattune to their infant children. These environmental risk factors increase the likelihood of negative developmental outcomes such as poor academic performance, externalizing behaviors, and an insecure attachment style. In compliance with the Child Abuse Prevention and Treatment Act and the Adoption and Safe Families Act, Child Welfare Services often places at-risk infants into traditional or kinship foster care placements. This study looked at how placement type and frequency of foster care placements affected the development of secure attachment behaviors of 46 prenatally substance-exposed infants as measured by the Attachment Q-Sort (AQS). While findings are statistically nonsignificant, results indicate two interesting patterns: (a) There is a positive association between placement transitions and AQS and (b) Displaced children that were placed into kinship foster care have greater attachment security than their non-placed counterparts. I present these findings to three clinicians who work with children involved in Child Welfare Services. Study results and clinician reactions provide actionable suggestions for shifting child welfare policy.

Keywords: Infants, prenatal substance exposure, Child Welfare Services, attachment, policy

Chapter 1: Literature Review

In the following study, I examined the effects of the type, frequency, and duration of foster care placements on attachment security at 30 months of age, within a prenatally substance exposed sample. First, literature, giving background on prenatal substance exposure and kinship foster care is presented in order to illuminate the needs of infants placed into foster care.

Prenatal Substance Exposure is Prevalent in the United States

The Substance Abuse and Mental Health Services Administration (SAMHSA) recently estimated that 12% of pregnant women use non-tobacco illicit drugs (SAMHSA, 2008). Two decades ago, the National Institute of Drug Abuse (NIDA) found that, of the four million women who gave birth, approximately 220,000 (5.5%) reported using illicit substances during pregnancy (Huestis & Choo, 2002; NIDA, 1992). Given the negative social and judicial consequences of reporting gestational drug use, the actual prevalence of maternal illicit drug use is assumed to have increased and thus closer to SAMHSA's estimate (Huestis & Choo, 2002; SAMHSA, 2008).

Maternal Drug Use Leads to Inconsistent Caregiving

When a mother is preoccupied with procuring illicit substances, she is less available to provide an organized and sensitive context for development (Roding, Beckwith, & Howard, 1991). Prenatally substance exposed infants tend to experience unpredictable changes in caregiver contexts in terms of home location, availability, and emotional stability of primary caregiver (Roding et al., 1991). Infants identified as prenatally exposed to illicit substances are placed into the Child Welfare System (CWS), often leading to a foster care placement and a very early disruption in caregiver contact. Caregiver nurturance, sensitivity, and stability increase the likelihood of an infant developing a secure attachment paradigm (Booth-Lafourche et al., 2006).

Conversely, frequent and prolonged ruptures in caregiving are detrimental to an infant establishing a secure attachment.

Effects of Secure and Non-Secure Attachment

For the purposes of this dissertation, I have conceptualized attachment as measured along a continuum from non-secure to absolutely secure. A secure attachment paradigm is associated with a healthy developmental trajectory in the form of positive psychological outcomes (Booth-Lafourche et al., 2006). These positive psychological outcomes include educational success, self-esteem, and social adjustment (Booth-Lafourche et al., 2006).

There are numerous negative consequences of children having a non-secure attachment to their primary caregiver. Van Ijendoorn, Schuengel, and Bakermans-Kranenburg (1999) found that a non-secure attachment style is associated with diminished ability to cope with stress, increases in aggression, and dissociative behaviors. Relationally, inconsistent caregiver contact disturbs the child's ability to make sense of the world, learn how to interact with others, and predict others' responses to them (Mitchell & Kuczynski, 2010). Children with a non-secure attachment style "lack a consistent strategy of dealing with negative emotions" (Van Ijendoorn et al., 1999, p. 239). Huestis & Choo (2002) have also found non-secure attachment to be associated with decreased ability to cope with stress, as measured by salivary cortisol. Non-secure attachment in infancy has been demonstrated to predict aggression by school-age (Van Ijendoorn et al., 1999), and has been associated with externalizing behavior problems in children prenatally exposed to cocaine (Seifer et al., 2004; Van Ijendoorn et al., 1999).

Child Welfare Services: CAPTA, DCYF, FTDC, and ASFA

An infant is typically identified as being exposed to substances either by maternal report or routine drug screening at birth (Burke, 2007). The Child Abuse Prevention and Treatment Act

(CAPTA) stipulates that medical and social services be provided to newborns and families that are identified as being at risk (National Center on Substance Abuse and Child Welfare [NCSACW], 2004b). In compliance with CAPTA, as well as in their capacity as mandated reporters, medical personnel are the lynchpin in connecting substance using mother-infant dyads with services through the child protection agency known in Rhode Island, as the Department of Children, Youth, and Families (DCYF).

DCYF investigates the extent of neglect or danger present in the infant's home. The infant is also assigned a DCYF caseworker who helps the family to navigate the system, but who ultimately is meant to serve the child's interests. If DCYF believes that the home is not a suitable place for that infant, they place the infant into a foster home. At times, a kin relative (very often a grandmother) steps forward and offers to take the infant, while at other times, the infant is placed into a traditional foster care home.

Family Treatment Drug Courts (FTDC) can judicially monitor substance-abusing parents. FTDC fulfills the role of traditional drug courts, providing timely treatment and regular drug testing. FTDC fosters a cooperative and transparent relationship with parents, explicitly communicating what parents need to accomplish in order to reunify with their children. FTDC parents tend to begin substance abuse treatment faster, stay in treatment longer, and are more likely to reunify with their children compared with non-FTDC families (Worcel, Furrer, Green, Burrus, & Finigan, 2008).

Under the Adoption and Safe Families Act of 1997 (P.L. 105-189; ASFA), there are guidelines to ensure that children spend a minimal amount of time with transitional caregivers (foster parents), before moving toward a permanent placement either with biological caregivers or adoptive parents. Promptly locating a stable and consistent caregiver can reduce the degree of

rupture and disorganization in the infant's attachment style (Bowlby, 2007). In this way, ASFA is reflective of attachment theory: that there is a critical period in forming a secure attachment relationship, that changing caregivers has a detrimental effect on attachment formation, and that secure attachment is associated with positive psychological outcomes.

Negative Sequelae of Prenatal Substance Exposure

Singer and her colleagues (2002) found that cocaine exposure caused adverse physiological consequences including decreased height, weight, and an increased likelihood of premature birth (Huestis & Choo, 2002; Singer et al., 2002). LaGasse et al. (2011) also found downstream medical consequences, documenting that children prenatally exposed to cocaine were more likely than non-exposed peers to experience cognitive impairments at 24 months, and four times more likely to be obese at age nine years.

Negative behavioral outcomes associated with prenatal substance exposure include challenges with learning, behavior, and school performance (Burke, 2007). Minnes and colleagues (2010) found that the combination of cocaine exposure and a high-risk environment predicted aggressive behavior. Children living in foster or adoptive care were also rated as having more behavioral problems than children living with birth mother or kinship based care. Substance use, caregiver psychological distress, and living environment all have independent contributory roles in expression of delinquent behaviors (Minnes et al., 2010).

Prenatal drug exposure does not directly impact attachment. Although prenatal substance exposure has clearly demonstrated physical, neurobiological, and behavioral impacts, it is not known to have a *direct* impact on attachment. When controlling for the effects of living in an impoverished community, prenatal substance exposure does not have a direct and independent contributing role to the development of attachment security (Bergin & McCollough,

2009). This finding illustrates that children exposed to poverty-driven risk factors develop similarly despite prenatal substance exposure. Since prenatal substance exposure has no direct causal link to attachment development, the etiology of insecure attachment was attributed to adverse conditions within the postnatal environment. Prenatal substance exposure exerts an indirect influence on attachment as it leads to ruptures in caregiving, which have negative effects on attachment development.

Maternal Characteristics

Substance-using pregnant mothers are less likely to be emotionally available or sensitive to the wants and needs of their infant, so prenatally substance exposed infants are at greater risk for developing an insecure attachment style by virtue of a less responsive neonatal caregiving environment. Mothers who use substances during pregnancy go on to reject, neglect, and demonstrate misattunement to their children at higher rates than non-substance abusing mothers. Parental insensitivity and parental depression have been shown to be highly correlated with insecure attachment behaviors in non-substance exposed samples (Van Ijendoorn et al., 1999). Moreover, mothers who engage in illicit substance use during pregnancy are often experiencing a greater degree of distress, which in turn adversely impacts their perception of their infants (Coles & Black, 2006; Sheinkopf et al., 2005). Among cocaine abusing mothers, caregiver distress as measured by the Brief Symptom Inventory (BSI) is associated with ratings of their children's behavior as more problematic than age typical norms as measured by the CBCL (Minnes et al., 2010). This finding indicates that when mothers are distressed, as drug-using mothers typically are, they are more likely to rate their infants as troublesome. This negative perception further exacerbates the poor relationship quality between a substance using mother and her infant. Early parenting stress significantly predicts a child demonstrating disruptive behaviors at 36 months,

indicating that maternal distress can have significant downstream consequences (Bagner et al, 2009). For example, methamphetamine use is linked to a higher incidence of maternal depression than seen in non-substance using mothers, which also contributes to a child developing an insecure attachment style (Smith et al., 2012). Substance use can lead to disrupted attachments whether infants remain in their mother's care, or go on to enter traditional or kinship foster care.

Advent of Kinship Foster Care

Children who are displaced from their immediate family due to a parent's substance abuse are more likely than children displaced due to non-substance related issues (e.g., child abuse) to then reside with extended family (Cuddeback, 2004). Kinship based foster care encompasses both formalized and informal arrangements in which a child is placed into the care of a biological or 'kin' relative (Flynn, 2002). Kinship based foster care emerged as a response to several factors within the long-term childcare culture. In the late 1990s, there was a growing emphasis on the importance of native ethnic and cultural identity formation and the belief that contact with blood ties were associated with more secure bonds. This, combined with a shortage of traditional non-relative foster care homes, the press for permanency planning, the expense associated with foster care, and the already existing relationships between children and relatives created a climate in which demand for kinship foster-care homes grew dramatically. The advent of kinship based foster care arrangements emerged as a valuable resource for children in want of interim foster caregivers (Flynn, 2002; Marcellus, 2008).

Advantages of kinship care. Conceptually, there are many advantages to kinship based foster care. This arrangement promotes the child maintaining a sense of community and connectedness to his or her biological family (Hong, Algood, Chiu, & Lee, 2011). Indeed, biological parents are more likely to maintain visitations with their children and be involved in

kin placements. Maintaining contact benefits the child by providing a sense of security and continuity. Access to family members can assist with the transition into a new living situation when the child is removed from the immediate family (Hong et al., 2011). Cuddeback (2004) conducted a meta-analytic review comparing traditional and kinship foster care, and found that children in kinship care had a stronger school attendance record and fewer suspensions. The Center for Law and Social Policy reported that children in kinship foster care experience greater stability, more positive perceptions of placements, and fewer behavioral problems than the traditionally placed children (Conway & Hutson, 2007). For many, kinship care has become a preferred form of interim foster childcare.

Disadvantages of kinship care. Studies examining parental qualities and styles find that kinship caregivers are more likely to engage in corporal punishment, display less warmth, and are more likely to live in poverty than non-kin counterparts (Hong et al., 2011). Also, kinship foster care providers, often grandparents, are more likely to be older and have medical problems, which can be another stressor for both the child and the caregivers (Koh, 2010). Within the family system a kin caregiver may hesitate to act as replacement parent for fear of overstepping boundaries, despite the importance of an infant attaching to their early caregivers (Zeanah, Shauffer, & Dozier, 2011). Also, there is some evidence that traditional foster care homes pay greater attention to school activities and encourage cognitive and social development in preschool aged children to a greater degree (Cuddeback, 2004). Kinship foster care placements tend to be more crowded, less clean, and provide inadequate supervision (Cuddeback, 2004).

Inequitable access to resources. Several studies note that kinship foster caregivers receive less support, services, and training from public agencies and clinical case-workers as compared to their traditional or non-kinship foster caregiver counterparts (Cuddeback, 2004).

The reason behind this lack of support is currently unclear; it may be that these caregivers don't request, don't need, or refuse services. Child welfare workers may also contribute to the inequitable distribution of resources, if they subscribe to the public perception that taking a blood relative into one's home is a moral responsibility, whereas taking a child of no relation is a public service deserving of support (Conway & Hutson, 2007). This discrepancy is a disservice to these families who often live on fixed incomes—the Department of Agriculture (2004) estimates that it costs at least \$7,000 per annum to raise a child.

Attachment comparisons. When comparing attachment outcomes in kin versus traditional foster care, placement stability appears to be a crucial moderating factor. Althenhofen, Clyman, Little, Baker, and Biringen (2013) found that, in a sample of children placed into a single foster care placement, rates of secure attachment were comparable to population norms at three years old, regardless of caregiver type (i.e., kinship, traditional, biological parents, or pre-adoptive parents), as measured by the Attachment Q-Sort (AQS). Webster, Barth, and Needell, (2000) found that those in kinship care experienced more placement stability and were less likely to have attachment problems. Children in kin placements transition less and are diagnosed with fewer attachment disorders compared with their counterparts in traditional foster care (Strijker, Knorth, & Knot-Dickscheit, 2008). A child moving within his first year of placement is associated with future placement instability (Webster et al., 2000). Given that the process of attachment is disrupted when children experience placement instability, it follows that placement stability and caregiver stability together foster secure attachment (Hong et al., 2011).

Ameliorating the Effects of Prenatal Insults with Postnatal Conditions

Prenatal substance exposure occurs within a network of biological insults and environmental risk factors including, but not limited to, low socio-economic status, low

educational level, and restricted access to health services (Davies, 2011). Given these biological and contextual stressors it is difficult to discern the relative impact of the neurobiological insults versus the environmental adversity that is part and parcel of maternal drug usage (Fisher et al., 2011). Without postnatal intervention, prenatal drug exposure appears to reliably place children at greater risk for disruptive behaviors, affective dysregulation, anxiety, cognitive challenges, and poor self-regulation in the short term, and peer rejection, academic difficulties, substance use, and delinquency in the longer term (Fisher et al., 2011; Lester et al., 2012). Fisher et al. determined that prenatal substance exposure and environmental adversity contribute independently to the development of these challenges. Thus, the aim of intervention is to decrease the infant's postnatal environmental adversity through either maternal intervention or an external placement.

Substance abusing mothers respond best to comprehensive interventions rather than targeted substance abuse treatment (Carlson, 2006). Treatment is most effective when it addresses their role as a mother, providing parent skills training and child care while attending therapy; ideally, women can attend long term residential treatment programs while living with and caring for their child. These women respond to non-confrontational approaches that address comorbid disorders, especially trauma histories. Added resources such as peer support, active outreach, and relapse prevention also increase long-term treatment efficacy (Carlson, 2006).

The attuned caregiving environment provides an opportunity to ameliorate some of the negative developmental sequelae of early attachment disruption and prenatal substance exposure. In a study examining the relative effect of substance exposure over the environmental adversity that accompanies living within a low-income community, Bergin and McCollough (2009) compared polysubstance using mothers and their exposed children with non-using or exposed yet

similarly impoverished dyads in terms of maternal sensitivity and short-term attachment using the Attachment Q-Sort. The authors found that, “[Substance] exposed children who are adopted into households with high-quality care develop similarly to nonexposed children while those not adopted were likely to have developmental delays” (p. 410). In another study examining the effect of early, specialized foster care on developmental outcomes in a substance exposed sample the authors found that “stable, committed foster care arrangements may promote development not predicted by prenatal conditions” (D’Angiulli & Sullivan, 2010, p. 465). When controlling for risk factors such as living in an impoverished community, prenatally substance exposed children develop similarly to their age-mates; thus, it is critical to intervene early and reduce environmental risks (Bergin & McCollough, 2009).

Effect of Foster Care on Attachment: Research Gaps

Despite the preponderance of literature documenting the virtues of secure attachment, very little is known regarding the impact on attachment of early foster care placement variables such as duration, frequency, and type. While we know, generally, that the less disruption in positive primary caregiver contact the better, we do not know whether these foster care features exert any leverage on attachment security (Stacks & Partridge, 2011). Moreover, as kinship care is a relatively new phenomenon, few studies systematically examine differences in child outcomes between kinship and traditional foster care (Iglehart, 2004).

This research utilizes archived data gathered by the Vulnerable Infants Program of Rhode Island (VIP-RI). VIP-RI referred families to Rhode Island FTDC in an effort to promote permanency planning in compliance with the Adoption and Safe Families Act (ASFA) regulation (1997), for infants prenatally exposed to substances and subsequently placed into child welfare services (Twomey, Miller-Loncar, Hinckley, & Lester, 2010; Twomey & Lester, 2007). This

data was collected from the summer of 2005 to the summer of 2008. The present study investigates the duration, frequency and type of foster care and its effect on early attachment development.

My hope is that this study can fill some of these knowledge gaps and contribute to the discourse on policy implications for promoting positive development among prenatally substance exposed and children with CWS involvement.

Hypotheses and Objectives

My hypotheses were as follows:

1. Duration of foster care will be inversely related to secure attachment.
2. Frequency of foster care placements will be inversely related to secure attachment.
3. Kinship based versus non-kin foster care placements will be positively associated with secure attachment.

The first and second hypotheses are derived from research indicating that placement stability is positively associated with secure attachment development (Booth-Lafourche et al., 2006; Healey & Fisher, 2011). The third hypothesis is based upon Webster and colleagues (2000) longitudinal study following 5,557 children involved in CWS over eight years, showing that infants placed into kinship foster care have more secure attachment styles than infants placed into traditional foster care. This research was designed to assess the degree and directionality of the relationships between attachment and foster care duration, frequency, and type.

Chapter 2: Method

In this study, I approached the data set using a two pronged strategy. First, I investigated the effects of caregiving environment on short-term attachment outcomes in an archived data sample of prenatally substance-exposed children. I examined the following aspects of foster care: (a) duration of foster care placements, a measure of total time spent in foster care; (b) frequency or number of transitions between placements; and (c) type of foster care placement (i.e., whether the child stayed in a kinship, or traditional foster care). Second, I interviewed three experts in CWS on their experiences facilitating secure attachment amongst prenatally substance exposed infants, working with their substance using mothers, and supporting their extended family as they provide interim kinship care.

Participant Characteristics

This research utilized archived data gathered by the Vulnerable Infants Program of Rhode Island (VIP-RI). VIP-RI referred families to Rhode Island FTDC in an effort to promote permanency placements in compliance with the Adoption and Safe Families Act (ASFA) regulation (1997), for infants prenatally exposed to substances and subsequently placed into child welfare services. The archival database on which this study is based is entitled, “*After ASFA: Outcome of the Rhode Island Family Treatment Drug Court.*” *After ASFA’s* intention was to provide longitudinal data on participants of a FTDC designed for families affected by prenatal substance use, investigate the long-term trajectories of graduates of the FTDC, assess developmental outcomes of substance-exposed infants, and determine the success of the FTDC in complying with ASFA (1997) guidelines for permanent placements. Uniquely, *After ASFA* was the first longitudinal study to follow the child developmental outcomes of mothers who had participated in FTDC.

This study followed 52 families with 54 children, including two sets of twins (Twomey et al., 2010; Twomey, Caldwell, Soave, Fontaine, & Lester, 2010). All of the children in this study received services from FTDC and were involved with CWS. Infants were assessed at six-month intervals when they were between 12 and 30 months. While the majority of the children in this study were placed into foster care either at birth or soon thereafter, some were allowed to stay with their biological mothers. If they weren't placed into foster care, they were closely monitored in order to prevent relapse and support maternal sober parenting.

All children in this sample share prenatal exposure to substances and involvement with child welfare services; they differ in periods of time spent with biological mother and alternative caregiver involvement. Demographically, this sample is racially diverse: 60% Caucasian, 19% African American, 15% Hispanic, 4% Native American, and 2% Pacific Islander (Twomey et al., 2010). The mothers in this study used a variety of illicit substances, with primary drugs of choice being marijuana (23%), cocaine (29%), opiates (10%), and polysubstance use (38%) (Twomey, Miller-Loncar et al., 2010) The researchers collected data via face-to-face interview, observation, parent report, and assessment administration.

Measures

The focus of the present study was on *infant attachment* outcomes at 30 months old, as assessed by the Attachment Q-Sort (AQS), *placement frequency* (i.e., number of transitions), *placement duration*, and *placement type*.

Infant attachment. I operationalized attachment as a continuous quantitative score derived from the Attachment Q-Sort. This measure yielded a score ranging from -1 to +1, with a score of +1 representing a prototypically secure child. Waters and Deane (1985) created the Attachment Q-Sort (AQS) to provide a dimensional measure of infant attachment, rather than

categorizing children using the Strange Situation Procedure (Ainsworth et al., 1978). In the AQS, a trained clinician observes the infant in their home setting for several hours. After this extended observation, the clinician sorts 90 cards containing descriptions of behavior into a preset number of piles ranging from most descriptive to least descriptive of the infant (Waters & Deane, 1985). The expert observer then compares the descriptive sort with the behavioral profile of a “prototypically secure child,” (Van Ijzendoorn et al., 2004, p. 1189). Waters and Deane (1985) consulted with several experts in attachment theory in constructing the behavioral profile of the ideally attached child. The Attachment Q-Sort will produce a security score ranging from -1.0 – +1.0, reflecting the correlation between the AQS profile of the target child and the prototypically secure child. Thus, a perfectly positive correlation, or score of +1.0, would indicate optimal attachment.

Most validity studies of the AQS have compared it to the Strange Situation Procedure, the gold standard method of assessing attachment (Ainsworth et al., 1978). The Strange Situation Procedure examines how an infant responds to the stress of being separated from his or her caregiver. The AQS assesses how the attachment relationship manifests functionally in everyday situations, focusing on maternal qualities such as sensitivity and responsiveness, as well as infant qualities such as trust, ability to be soothed by the caregiver, and ability to comfortably explore surroundings. In a meta-analysis involving 139 separate samples ($n = 13,835$), Van Ijzendoorn and colleagues (2004) transformed the Strange Situation Procedure classification to a common metric for effect size, correlation coefficient r , and found that it was moderately associated with Attachment Q-Sort scores ($r = .42$). The authors conjectured that the Strange Situation Procedure focuses on the attachment mechanism at times of stress and anxiety, whereas the AQS explores more broadly the child’s expectations of parental guidance in a natural setting. Further support

for this interpretation is offered by a moderate correlation of .39 between AQS scores and maternal sensitivity, as measured by (Van Ijzendoorn et al., 2004).

Placement frequency. The placement frequency variable was operationalized as the discrete number of distinct placement transitions that the infant experienced during the observed length of time. For example, a removal from biological care and subsequent return was categorized as two for placement frequency, having transitioned twice.

Placement duration. Placement duration was meant to be a measure of total days that the infant was in a placement outside of his or her biological mother's care. Unfortunately, the files under review did not contain reliable information on this variable, and thus did not permit an investigation on the association between placement duration and infant attachment.

Placement type. I categorized children in this study as being in one of three placement types: biological care, kinship foster care, or traditional foster care. A designation of biological care indicated that the infant was never removed from the care of his or her biological mother. If an infant had multiple removals and mixed placement types, but at least one of these placements was kinship, this child was categorized in the kinship foster care category.

Procedures

Infant attachment and placement qualities were assessed using the archival information available from the original researchers (Twomey et al., 2010). I de-identified the information, assigning each participant a new case number. I also noted the placement frequency, placement duration where available, and categorized each child's placement type given the available data. After completing statistics for emerging data patterns, I conducted semi-structured interviews with three women who work closely with children in foster care.

Semi-Structured Interviews

The purpose of these interviews was to invite consultants to both clinically interpret my findings as well as to comment on the other factors that impact secure attachment development. Eligible interviewees were colleagues with ongoing experience working with foster care children. All interviewees consented to participate and were informed prior to the interview that their identifying information would be protected in the final paper. See Appendix A for the semi-structured interview guide that was used with all interviewees. The interview guide included a brief description of the project, and an invitation to comment on three general areas: (a) the relationship between placement frequency and attachment; (b) the relationship between placement type and attachment; and (c) what foster care factors support a child's healthy development. All interviews were conducted in person, were approximately 30 minutes long, and were documented via detailed notes. I then engaged in a thematic analysis and presented findings based on the frequency that that particular theme emerged and its explanatory value (Dixon-Woods, Agarwal, Young, & Sutton, 2005). This supplementary endeavor was designed foremost to clinically contextualize the relationships among the variables of interest, and secondarily to inform child welfare policy pertaining to placement decisions and service delivery. These interviews, along with the literature review, informed broad policy recommendations that could facilitate attachment security and positive developmental outcomes among prenatally substance-exposed infants in Child Welfare Services.

Chapter 3: Results

Data Cleaning and Preparation

To protect the anonymity of participants, I arbitrarily re-assigned new identification numbers to cases in the archival database. Eight of the 54 data files were lacking AQS scores, reducing the usable sample size to 46. A further case was excluded from analyses involving *placement type*, because the infant's placement in a group home was unique in this dataset, not conforming to any of the other placement types. This infant's data did contribute to exploring the relationship between *placement frequency* and *infant attachment*, resulting in a slightly smaller sample size for the first hypothesis (n=45) than for the second hypothesis (n=46).

Descriptive Statistics

Although all children in this study were CWS involved, 15 (33% of the sample) were never removed from their biological mother's care (zero placements). Ten infants (22%) had one placement transition, meaning that they were placed with an alternative caregiver and never returned to the home of their biological mother during the first 30 months of life. Thirteen infants (28%) had two placement transitions, indicating one foster care home, followed by a return to the biological mother's care. The remaining 17% of the sample had more than two placement transitions, as can be seen in Table 1 and Figure 1 in Appendix B.

A designation of biological care indicated that the infant was never removed from the care of his or her biological mother. It is important to note that if an infant had multiple removals and mixed placement types, but at least one of these placements was kinship, this child was categorized in the kinship foster care category. Fifteen infants (33%) were never removed from the care of their biological mother. Twelve infants (27%) were placed into traditional foster care.

Finally, 18 infants (40%) were placed with kinship foster care providers for either all or part of their time spent in a placement outside of the biological parent's care as can be seen in Table 1.

Attachment was operationalized as a continuous quantitative score derived from the Attachment Q-Sort (AQS). This measure yielded a score ranging from -1 to +1, with a score of +1 representing a prototypically secure child. This sample ($n = 46$), had an AQS mean total score = .20 (standard deviation .34; range = -.44 - +.74). Refer to Figure 2 in Appendix B for a graphic illustration depicting the descriptive statistics for AQS data.

Table 1

Descriptive Data

Variable	n	%	mean	st. dev.
Number of Placement Transitions				
0	15	33		
1	10	22		
2	13	28		
3	2	4		
4	3	7		
5	2	4		
6	1	1		
Placement Type				
Biological Parents	15	33		
Traditional Foster Care	12	26		
Kinship Foster Care	18	29		
Group Home	1	1		
Infant Attachment (AQS)			.20	.34

Statistical Power and Data Analysis

Given that Placement Frequency was strongly skewed, violating the normality assumption for parametric statistical tests, I conducted non-parametric tests, utilizing non-parametric parallels to the one-way ANOVA test and the Pearson Product Moment Correlation (Kruskal-Wallis and Spearman's Rho) to explore the relationship between placement frequency, placement type, and infant attachment.

In Healey and Fisher's (2011) study examining favorable outcomes among young children in foster care, they set alpha at a liberal .10 to counterbalance a small sample size and consequent weak statistical power. With a sample size of 45 and 46, this study was similarly underpowered to detect anything smaller than a large effect. Therefore, I also set alpha at .10, resulting in moderate power to detect a medium-sized effect.

Hypothesis #1: Frequency of foster care placements will be inversely related to attachment security. Spearman's Ranked Correlation analysis identified a nonsignificant correlation between the number of placement frequency and infant attachment total score ($r_s = .21, p = .16$). Figure 3 in Appendix B depicts a scatter plot of the raw (i.e., non-ranked) data concerning Frequency of Placement(s) and AQS scores. Following the initial correlation, I explored differences in infant attachment between those children who had never been removed from their biological mothers, those who experienced either a single foster placement or a placement ending with return to the biological parent, and those with three or more placement transitions. The placement frequency scores were clustered into three categories: (a) Group 1 (no placement transitions; $n = 15$), (b) Group 2 (1-2 placement transitions; $n = 23$), and (c) Group 3 (3+ placement transitions; $n = 8$). The Kruskal-Wallis test was used to evaluate infant attachment differences among these three groups. An illustration of the distribution of infant attachment within each of these subsamples can be seen in Figure 4 in Appendix B. The critical value for a three-group Kruskal-Wallis test with $\alpha = .1$ is $H = 4.61$. The Kruskal-Wallis Test statistic in this sample was calculated to be $H = 4.47$, falling short of the significance threshold set for this test, and also in the *opposite direction* to the hypothesis: frequency of foster care placement was weakly but *positively* associated with AQS attachment security.

Hypothesis #2: Kinship based versus non-kin foster care placements will be positively associated with secure attachment. I calculated Spearman's Ranked Correlation to determine the relationship between these two variables. Results indicated that the placement type had a weak and nonsignificant correlation to the infant attachment ($r_s = .22, p = .15$). See Figure 5 in Appendix B for a comparative histogram depicting the relationship between placement type and infant attachment.

Interviews with Experts in Child Welfare Services

It is important to clinically contextualize the challenges of working with this population, substance exposed infants, substance abusing mothers, and their extended families. I conducted semi-structured interviews with three stakeholders, identified below as X, Y, & Z. Their impressions of important issues to consider when facilitating positive outcomes for prenatally substance exposed infants, working with their substance using mothers, and supporting their extended families whom often provide interim kinship caregiving are provided below.

On placement frequency. Stakeholder Y noted that she has worked with several toddlers who have had multiple placements, and in her clinical experience, these children typically have a very difficult time with relationships and she spends much of her time working on attachment issues. Stakeholder X also speaks to how critical it is to be flexible in order to tailor services to fit the unique needs of each family, noting the following:

There are so many factors that impact what you're studying, that impact resiliency, that impact what a child does. Studies are great [but] when you have contact with the kids and the families; I think what you really get a sense of is all the different exceptions.

On the relationship between placement type and attachment. The three stakeholders all confirmed that they've witnessed both successful and difficult kinship placements. Stakeholder X commented that, mostly, one can "make an assumption that there is a higher level of commitment" in a kinship placement. Stakeholder Y also noted mothers are more likely to visit a kin placement, indicating the importance of biological caregiver involvement. Stakeholder Y states that, "generally they [foster care infants] transition better when it is a kinship home, [because there is] some level of familiarity ... to build on as opposed to being placed with a complete stranger." Stakeholder Y added that traditional foster care providers often get partial

histories of the infant and become surprised when the infant or toddler is emotionally triggered and that getting a history is crucial in supporting the infant and creating a stable placement.

Observed drawbacks of kinship care. The stakeholders commented on the drawbacks of kinship care. In X's experience, custodial grandparents can ascribe negative characteristics to the child that more accurately describe the parent. Stakeholder Y also commented on the possible presence of recurring negative environmental factors. Sometimes, she has felt uncomfortable placing an infant into a caregiving environment that originally contributed to someone becoming a substance abuser.

Experienced inequity within support services. In later comments about how support is critical in promoting a stable caregiving placement, X commented that, in her experience, DCYF does not support kin placements to the same extent that they do traditional foster care placements. Stakeholder X postulated that this inequity may stem from an underlying assumption that kin placements do not need or want as much support. Stakeholder Y further observed that in her experience kinship foster parents receive less support, and that services are both inequitably offered and inequitably required. Stakeholder Y pointed out that traditional foster caregivers are "required to go through a lot more training and preparation to be foster parents, whereas in kinship, [there is] no level of training, preparation, background, or education that is given to those placements beforehand." These clinical workers' experiences with infants in foster care corroborated that there are both benefits as well as complicating issues with kinship foster care placements.

On what factors support an infant's healthy development. The last portion of the semi-structured interview was designed to gauge clinical impressions on other variables that

exert influence on an infant's psycho-social development. Their reactions fell into four thematic categories: flexibility, history, biological caregiver involvement, and support.

Flexibility. Stakeholder X spoke about the importance of flexibility in working with this population as every family situation will require a different method and style of intervention. Stakeholder Z also noted the importance in maintaining flexibility when working with substance using mothers and their infants. She pointed out that each family might benefit from something different given the variable circumstances.

History. Stakeholder X commented on the importance of sharing pertinent information about the infant's history with potential foster caregivers. In compliance with the confidentiality stipulations of the Health Insurance Portability & Accountability Act (HIPAA), caseworkers do not share extensive case histories with prospective foster caregivers. Stakeholder X said, "I hear a lot from placements that they didn't have information [at the beginning of a placement] that they felt they needed..." Stakeholder Y voiced her strong belief that "foster parents...need to be given a foundation of information..."

Biological caregiver involvement. Stakeholder X commented on the degree and quality of biological family involvement; both how often an infant sees his or her family, as well as whether the biological family has a collaborative or an adversarial attitude towards the interim placement caregivers makes a huge difference. Stakeholder X commented on the importance of maintaining an infant's connection to his or her parents, stressing that, "continuity of people... that's how we form identity is through relationships." Stakeholder X speaks to how, for an infant, the mother is the primary attachment object, so when an infant spends six or twelve months away from maternal care it can have a negative impact on their attachment development.

From Z's perspective, it is important to promote relationships with the biological family when it is safe and appropriate. She noted that, while facilitating access and communication with the biological family is important, if the biological parent is inconsistent and does not come to scheduled meetings it can be harmful to the young child. What's more, Z notes that when parents continue to abuse substances, refuse treatment, and do not take steps towards being stable and loving caregivers to their infant, it becomes important to terminate the parental rights. Given the importance of striking this balance, Z further noted that, when interactions with biological families are safe and appropriate, "supporting the relationship with biological family is important...because at the end of the day when a child is 18 years old they can make the decision on who is a part of their lives." Here, Z points to how permanency planning dictates who will be the primary caregiver and thus the primary attachment object for the infant; yet, when the infant eventually reaches adulthood, he or she can choose to have a relationship with the estranged biological family.

In Y's experience, she has found that the system discourages communication between biological and foster parents. She said, "I think that's a mistake, they should be co-parents because that's what they are, especially if the plan is reunification."

Support. Stakeholders Y and Z commented on the importance of offering support services in order to make placements more stable. Stakeholder Y commented on the universality of challenges in any foster care placement, only a small portion of which includes additional support and services such as in-home therapy or respite. There are "lots of dynamics and interactions that occur as a result of having foster children... foster parents need support in order to address these presenting issues." Support in the form of both training and services are imperative to promote the overall stability of foster care placements.

Chapter 4: Discussion

Findings

In this study, I attempt to identify associations between placement stability, placement type, and attachment in a prenatally substance exposed and system-involved sample. Analyses do not reveal significant findings, which indicate that there is not a reliable linear relationship between the variables of interest; however, two notable and unexpected patterns that emerged warrant investigation:

1. There may be a positive association between placement transitions and Attachment security.
2. Displaced children who were placed into kinship foster care may have greater attachment security than their non-placed counterparts.

Preliminary Interpretation

While the non-parametric tests fell short of statistical significance, the small sample size and consequently low statistical power may nevertheless warrant some attempt to interpret these findings (Bem, 2004; Drotar, 2009; Sterne & Smith, 2001). The pattern depicted by Figures 4 and 5 in Appendix B suggest that the relationship between infant attachment and placement frequency may warrant further exploration.

How Should These Results Be Understood?

There are multiple potential explanations for why the expected phenomenon was not observed in the data that warrant further discussion. The first is that the relationships sought, simply do not exist within this dataset. For example, the literature reviewed affirmed that there is a relationship between caregiver contact and secure attachment (Roding et al., 1991); however, within this sample, despite consistent maternal contact and high rates of reunification, fewer than

half of the infants had secure attachments. There are two possible explanations for the failure of this study to find a significant relationship between placement frequency, placement type, and attachment security. The first explanation is that there is no substantial relationship amongst these variables and the second explanation is that there is a relationship, but this study was not powerful enough to observe the relationship between placement variables and attachment.

Research documenting that the relationship between placement frequency and attachment security is robust supports this second explanation (Altenhofen et al., 2013; Stacks & Partridge, 2011). Within the literature examining the relationship between placement type and attachment security, some have conjectured that placement type exerts influence over placement frequency, which in turn impacts attachment security (Strijker et al., 2008). This suggests that there is likely a relationship between placement frequency, placement type, and infant attachment that was not observed in this study.

One possible explanation for why the expected phenomenon were not observed is that the participants in this study differed significantly from the population norm with regards to the formal support services they received. The participants in this study are unique, all having received FTDC services. Carlson (2006) found that the majority of substance-using mothers do not typically receive treatment. Thus, the robust relationships between placement frequency, type, and attachment, documented in the literature and derived from a population norm lacking treatment and support, may not necessarily apply to this unique sample (Carlson, 2006).

A second potential explanation was that the sample size was too small to capture between group differences with regards to placement frequency and type. For example, in examining the effect of placement frequency on attachment security the subsample size was widely disparate: Group 1 (no placement transitions; $n = 15$), Group 2 (1-2 placement transitions; $n = 23$), and

Group 3 (3+ placement transitions; $n = 8$). Inequitable subsample sizes are a side effect of using real world data, yet it may have negatively impacted this study's ability to observe a significant correlation.

Finally, a third potential explanation for the nonsignificant results is that the research design was overly simplistic; placement frequency and placement type alone cannot account for attachment security. As Stakeholder X pointed out, there are "so many factors" to take into account when considering infant attachment. If this explanation is true, it follows that there are other critical factors that impact secure attachment development that were not examined in this study.

One such important factor is caregiver quality and attitudes. Several studies have affirmed the importance of parenting quality and competence when accounting for early attachment development (Altenhofen et al., 2013; Ijzendoorn et al., 2004). Regardless of caregiver type, one's sensitivity and ability to care for a young child increases the likelihood of an infant developing a secure attachment paradigm (Bergin & McCollough, 2009; Booth-Lafourche et al., 2006). Conversely, caregivers who reject, neglect and misattune to their infants decrease the likelihood of secure attachment development (Smith et al., 2012; Van Ijzendoorn et al., 1999). Again, stakeholder X notes that the "fit" or relationship between a particular caregiver-infant dyad is the most critical factor in the stability of a placement.

Another variable important to secure attachment development is access to both formal and informal support systems. All caregivers in this study received formal support from FTDC. Prior research has documented that when a caregiver receives support services such as remuneration, counseling, or training, their ability to be emotionally available to the needs of their child increases (Bergin & McCollough, 2009; Minnes et al., 2010). However, substance

abusing mothers tend to be socially isolated and lack informal support networks such as extended family, trusted neighbors, and religious affiliations (Carlson, 2006). The role of these informal support systems may be critical in bolstering a caregiver being attuned to their infant.

Finally, the nature and frequency of ongoing visitation with family members while in care is a critical variable to consider in accounting for secure attachment. Maternal contact can act as both a risk and a protective factor depending upon the mother-infant dyad. As Stakeholder Z notes, if the maternal contact is unpredictable or dangerous, these visits can impede the infant's ability to form a secure attachment, a healthy loving connection to another caregiver. Since an infant's attachment dynamic is formed during the first three years and has far reaching developmental consequences, it is critical to make decisions on permanency planning within the first months and years of life of the infant's life (Van Ijendoorn et al., 1999). Terminating parental rights can be to the infant's developmental benefit when the parent is observed to be unsafe and erratic. Stakeholder Z spoke to how parents have, at a minimum, 15 months from the start of CWS involvement before the termination of parental rights (Wilhelm, 2002). She believes that if parents are unable to make progress in treatment, maintain sobriety, and demonstrate an ability to be stable, loving, and consistent caregivers during that time, terminating parental rights and providing a permanent placement will best support the infant's developmental needs.

Alternatively, maintaining contact with family members, when safe and appropriate, can increase a young child's perception of stability and continuity when transitioning into foster care (Hong et al., 2011). Stakeholder Z also stresses the importance of maintaining relationships with the biological family, when therapeutically beneficial, when a child is in foster care. When a caregiver is committed, safe, and attuned, maintaining regular visits can increase the infant's

healthy emotional priming, attachment security, and later emotional regulation (Healey & Fisher, 2011). In all, the development of attachment security is a nuanced and complex process; foster care type and placement frequency alone, while critical, are not robust enough predictor variables to fully account for secure attachment development.

This study sought to clarify both the directionality and the relative impact of placement stability and type on secure attachment development. In the service of promoting positive attachment outcomes amongst prenatally substance-exposed infants, the relationships between placement frequency, type, and infant attachment may warrant further investigation (Bem, 2004; Hong et al., 2011). While prior research has shown that both placement stability and type contribute to attachment security, examining the effect of other foster care predictor variables may be important to understanding the development of secure attachment development in prenatally substance-exposed infants.

Broad Policy Recommendations

Less directly connected to the results of this study, but broadly connected to the state of policies concerning infant mental health, I present broad policy recommendations for infant welfare policy reform in order to promote positive outcomes among prenatally substance-exposed infants (Harden, 2007). This study has highlighted the complexity of variables that determine whether children involved in CWS develop a secure attachment style. As I learned anecdotally from the stakeholders, allowing greater flexibility in executing policies such as HIPAA and ASFA would enable CWS to tailor services and placements to serve the best interest of the infant. Given that stable caregiving arrangements diminish negative developmental consequences of adverse prenatal conditions, it is crucial to assess and amend these policies to best support these at-risk infants (D'Angiulli & Sullivan, 2010).

ASFA efficacy. ASFA stipulates that permanency planning be considered from the beginning of the placement. In effect, ASFA is meant to prevent an infant from languishing within DCYF custody indefinitely. By design, ASFA prioritizes permanency and placement stabilization over an infant's return to his or her biological family. In a longitudinal study, infants that remained in foster care until 18 years old, had over twice the levels of maladjustment than infants who had been adopted or reunified while still in infancy (Kernan & Lansford, 2004). In this way, ASFA's emphasis on finding a safe and stable placement serves the best interests of infants in CWS.

The logical consequence of this policy is the use of "concurrent planning," or simultaneous consideration of both reunification and adoption. The opinions of the stakeholders consulted as part of this project suggest that the policy of concurrent planning prioritizes preserving the biological family unit over adoption. According to Z, it takes upwards of a year for a goal to change from reunification to adoption. The termination of parental rights can begin as early as fifteen months after the initial case is filed, yet intensive substance abuse treatment is recommended for 18-25 months (Carlson, 2006; Wilhelm, 2002). While concurrent planning allows maximum opportunity for a parent to regain custody of his or her child, realistically the allotted time may not be enough for a parent to be in remission from substance abuse and learn caregiving skills.

When a mother demonstrates an ability to connect with her infant and a commitment to her substance abuse treatment, it may be beneficial to allow for infants to reside with their mothers while they are in treatment. Given that this study had high rates of reunification and permanency, yet less than half of the infants had attachments that were comparable to the secure ideal prototype of a non-clinical sample, it raises concerns about the ramifications of infants

being in foster care for any length of time. It may be important to develop alternatives to child removals while at the same time ensuring child safety. Residential treatment programs that allow parents to co-reside with their children and intensive outpatient interventions may provide families with safe alternatives to out-of-home placements (Carlson, 2006).

Caveats surrounding confidentiality of infants in foster care. The interviewees consulted as part of this project suggest that a greater emphasis be placed on implementing confidentiality policies with flexibility. While confidentiality protects the interests of the child by limiting access to sensitive data, there may be circumstances in which it would be advantageous to prudently share some case history. This may violate strict confidentiality, yet it is in the service of preparing the caregiver and the placement for a child's potential emotional reactivity or behavioral outbursts. When a caregiver understands a child's history, they tend to have more compassion for the child, which in turn promotes placement stability. This history can take a form as simple as a "kid factsheet." This factsheet could list the child's preferences, such as favorite color, activities, games, foods, and rituals around mealtime and bedtime, to facilitate child-caregiver bonding.

Access to support. In terms of both support services and biological caregiver involvement, traditional and kin placements have similar needs. The consultants as well as the literature reviewed for this project indicate that a greater emphasis should be placed on offering support services in order to stabilize traditional foster care placements. Under the current policies the foster home itself is a therapeutic intervention. This may be enough support to stabilize some children, but others require additional support. Kinship foster families are important resources and should be acknowledged as a valuable and therapeutically relevant option, rather than a familial obligation. The Department of Children and Families (DCYF) could offer a suite of

services that can include a caseworker, clinician, therapeutic mentor, and a family resource specialist, to all foster homes. Legislation to provide support of kinship foster families (comparable to that provided to traditional foster families) would legitimize the role that these families play in the foster care system. Institutional support would increase access to both financial and learning resources, which would in turn support the needs of the children placed into these homes.

DCYF must offer services and training to kin caregivers that parallel those required for traditional foster homes. Stakeholder Y noted that while all children in CWS have caseworkers, few kin caregivers utilize this resource; thus, explicitly informing kinship foster homes that their caseworker is available to them may be beneficial. DCYF can also invite or even require kinship foster caregivers to participate in training that is already in place for traditional foster parents. Topics of these training sessions include safety, medication management, and psycho-education on trauma and behavioral intervention strategies. Another mechanism that is already in place but is underutilized is respite. Respite services (i.e., when a foster child briefly and intermittently lives with another caregiver) may be quite useful in preventing caregiver exhaustion.

Furthermore, parents recovering from substance abuse require ongoing access to treatment to support them in their efforts in maintaining a sobriety and to assist them with the demands of parenting as their infants enter different developmental stages. Policies and practice must promote parents' help-seeking behaviors. Messages need to be conveyed to parents that asking for help is a healthy and expectable response to dealing with the multiples stressors associated with raising young children and being in substance abuse recovery.

Finally, given that CWS deems the biological caregiver to be safe and beneficial to the infant's development, both kinship and traditional foster care placements would benefit from

increased collaboration. For kin placements, it may be advantageous for the mother to reside within the extended family placement simultaneous to being in treatment. For traditional foster care home, the DCYF worker could facilitate more regular interactions with biological family.

Altogether, allowing for greater flexibility in the execution of policies that are already in place would allow clinical providers to tailor services to fit each family's needs. This would promote the ongoing stability of both the placement and the child.

Limitations

There are several limitations of the study that adversely affected both its potential for clinical significance as well as its generalizability. This study was initiated with full awareness of these limitations and an understanding that there was a possibility of not discerning a clinically significant outcome. As this study concerns an extremely at-risk population, it is important to examine any possible avenue towards promoting improvements in the population's care and wellbeing, even if not certain to succeed.

Data source limitations. The purpose of the original study, wherein the archived data was first gathered, was not the same as the purpose of the current study (as with any research that utilizes archived data). As I excavated data, I learned that large portions of data were unavailable or inconsistently gathered. For example, data on the total length of stay in foster care (i.e., specific dates of removal and return to biological caregiver) are provided in some instances and not others. The lack of many specific dates is a significant limitation.

The information regarding placement type is also somewhat ambiguous and I make a forced choice, designating children who were placed with both kinship and traditional foster care providers as falling under the kinship foster care category alone. In this way, one can examine the dosing effect of whether it makes a difference to have at least a portion of one's foster care

with a relative. However, I am unable to determine the direct effect of each placement type on attachment security.

Sample specificity. The subjects are recruited from a particular pool of characteristics, which limits the study's external validity. It would be difficult to apply findings to non-prenatally substance exposed infants or children placed into foster care beyond infancy. Specificity also limits recruitment. The relatively low sample size limits conclusions that could be drawn. If the study contained a larger sample, it would have had more power to detect small effects and this study may have produced more statistically significant findings.

Reductive. Lastly, a general limitation of this study is that in the service of determining a linear relationship between attachment and aspects of placement, I may have become overly reductive. Ignoring the myriad of uncontrollable factors that impact such a complex phenomenon as attachment is an inherent flaw within the study, which contributes to the weakness found within the correlations. While it is impossible in any real world scientific inquiry to completely isolate the research variable, the more data one is able to take in, the more likely one is to find strong correlations between attachment and its independent variables.

Directions for Future Research

Despite nonsignificant findings, the results point to a relationship between placement type and attachment that warrants future exploration in a larger, more statistically powerful, sample (Bem, 2004). To design an experiment for the purpose of studying foster care placement's effect on attachment, one could exclude children with histories of mixed foster placement types. Moreover, one could assess whether the type of placement alone makes a significant difference to attachment security. It would also be useful to look at attachment using both the AQS as well as the more traditional strange situation procedure, so as to gain more

information on each child's development of his or her attachment paradigm.

Furthermore, if kin placements do indeed promote better attachment outcomes, it may be worthwhile to investigate whether a kin placement can ameliorate other important aspects of development that are often adversely affected by multiple placements. Developmental outcomes that are important to explore in the future include advent of externalized behaviors, especially aggressive behaviors, academic performance, and neurobehavioral inhibition.

Further research is critical to address what is, arguably, the number one public health concern in this country, child abuse and neglect. Infants are the most vulnerable population, both disproportionately likely to be victims of maltreatment, such as neglect, and likely to enter CWS due to parental substance abuse (Harden, 2007). The Centers for Disease Control and Prevention (CDC, 2014) lists early neglect as a significant adverse childhood experience, having far reaching negative developmental sequelae. Infants are overrepresented among the foster care population: 26% of children in CWS entered care when they were younger than two (Harden, 2007). There is an epidemic of prenatally substance-exposed infants in CWS, disproportionately over-represented and under-supported. The opiate epidemic in this country has had a profound impact on infants in CWS, increasing their ranks, as the supply of services remains insufficient. Yet it is impossible to address the needs of the infants without supporting the needs of addicted, impoverished, and under-resourced mothers. The next great hurdle for mental health professionals and policy makers alike will be to address the complex systemic factors that contribute to caregiver substance abuse, which in turn leads to infant abuse and neglect.

References

- Adoption and Safe Families Act P.L. 105-189; 1997.
- Ainsworth, M.D.S., Blehar, M., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the strange situation*. Hillsdale, NJ: Erlbaum.
- Altenhofen, S., Clyman, R., Little, C., Baker, M., Biringen, Z. (2013). Attachment security in three-year-olds who entered substitute care in infancy. *Infant Mental Health Journal, 34(5), 435-445*.
- Bagner, D. M., Sheinkopf, S. J., Miller-Loncar, C., LaGasse, L L., Lester, B. M. Liu, J. B., ... Das, A. (2009). The effect of parenting stress on child behavior problems in high-risk children with prenatal drug exposure. *Child Psychiatry and Human Development, 40(1), 73-84*
- Bem, D. (2004). Writing the empirical journal article. In J. M. Darley, M. P. Zanna, & H. Roediger III (Eds.), *The complete academic: a career guide. Pediatric psychology* (2nd ed., pp. 105-219). Washington, DC: America Psychological Association.
- Bergin, C., & McCollough, P. (2009). Attachment in substance-exposed toddlers: The role of caregiving and exposure. *Infant Mental Health Journal, 30(4), 407-423*.
- Booth-Laforce, C., Oh, W., Kim, A.H., Rubin, K.H., Rose-Krasnor, L. Burgess, K. (2006). Attachment, self-worth, and peer-group functioning in middle childhood. *Attachment & Human Development, 8(4), 309-325*.
- Bowlby, R. (2007). Babies and toddlers in non-parental daycare can avoid stress and anxiety if they develop a lasting secondary attachment bond with one carer who is consistently accessible to them. *Attachment & Human Development, 9(4), 307-319*.

- Burke, K., D. (2007). Substance-exposed newborns: Hospital and child protection responses. *Children and Youth Services Review, 29*, 1503-1519.
- Carlson, B. E. (2006). Best Practices in the Treatment of Substance-Abusing Women in the Child Welfare System. *Journal of Social Work Practice in the Addictions, 6*(3), 97-115.
- Center for Disease Control and Prevention. (2014). Violence Prevention. Retrieved from <http://www.cdc.gov/violenceprevention/acestudy/prevalence.html>
- Coles, C. D., & Black, M. M. (2006). Introduction to the special issue: Impact of prenatal substance exposure on children's health, development, school performance, and risk behavior. *Journal of Pediatric Psychology, 31*(1), 1-4.
- Conway, T., Hutson, R. Q. (2007). Is kinship care good for kids? *Center for Law and Social Policy*. Retrieved from <http://www.clasp.org>
- Cuddeback, G. S. (2004). Kinship family foster care: A methodological and substantive synthesis of research. *Children and Youth Services Review, 26*, 623-639.
- D'Angiulli, A., & Sullivan, R. (2010). Early specialized foster care, developmental outcomes and home salivary cortisol patterns in prenatally substance-exposed infants. *Children and Youth Services Review, 31*, 460-465.
- Davies, D. (2011). *Child Development: A Practitioner's Guide 3rd edition*. New York: The Guilford Press.
- Dixon-Woods, M., Agarwal, S., Young, B., Sutton, A. J. (2005). Synthesising Qualitative and Quantitative Evidence: A Review of Possible Methods. *Journal of Health Services Research & Policy, 10* (1), 45-53.
- Drotar, D. 2009. Editorial: How to write an effective results and discussion for the journal of pediatric psychology. *Journal of Pediatric Psychology, 34*(4), 339-343.

- Fisher, A. P., Lester, B. M., DeGarmo, D. S., Lagasse, L. L., Lin, H., Shankaran, S., Bada, H. S., Baur, C. R., Hammond, J., Whitaker, T., & Higgins, R. (2011). The combined effects of prenatal drug exposure and early adversity on neurobehavioral disinhibition in childhood and adolescence. *Development and Psychopathology, 23*, 777-788.
- Flynn, R. (2002). Research review: Kinship foster care. *Child and Family Social Work, 7*, 311- 321.
- Harden, B. J. (2007). *Infants in the child welfare system: A developmental framework for policy and practice*. Washington, DC: ZERO TO THREE.
- Healey, C. V., Fisher, P. A. (2011). Young children in foster care and the development of favorable outcomes. *Children and Youth Services Review, 33*, 1822-1830.
- Hong, J. S., Algood, C. L., Chiu, S., Lee, A. (2011). An ecological understanding of kinship foster care in the United States. *Journal of Child and Family Studies, 20*, 863-872.
- Huestis, M. A., & Choo, R. E. (2002). Drug abuse's smallest victims: In utero drug exposure. *Forensic Science International, 128*(2), 20-30.
- Iglehart, A. P. (Eds.). (2004). Kinship foster care: Filling the gaps in theory, research, and practice [Special section]. *Children and Youth Services Review, 26*, 613-621. Doi: 10.1016/j.chilyouth.2004.04.004
- Kernan, E., Lansford, J. E. (2004) Providing for the best interests of the child?: The Adoption and Safe Families Act of 1997. *Applied Developmental Psychology, 25*, 523-539.
- Koh, E. (2010). Permanency outcomes of children in kinship and non-kinship foster care: Testing the external validity of kinship effects. *Children and Youth Services Review, 32*, 389-398.

- Lester, B. M., Lin, H., DeGarmo, D. S., Fisher, P. A., LaGasse, L. L., Levine, T. P., ... Higgins, R. D. (2012) Neurobehavioral disinhibition predicts initiation of substance use in children with prenatal cocaine exposure. *Drug and Alcohol Dependence*, 126, 80-86.
- Lieberman, A.F., & Van Horn, P. (2008). *Psychotherapy with Infants and Young Children: Repairing the Effects of Stress and Trauma on Early Attachment*. New York: The Guilford Press.
- LaGasse, L. L., Gaskins, R. B., Bada, H. S., Shankaran, S., Lie, J., Lester, B. M., ... Robers, M. (2011). Prenatal cocaine exposure and childhood obesity at nine years. *Neurotoxicology and Teratolog* , 33, 188-197.
- Marcellus, L. (2008). (Ad)ministering love: Providing family foster care to infants with prenatal substance exposure. *Qualitative Health Research*, 18(9), 1220-1230.
- Minnes, S., Singer, L. T., Kirchner, H. L., Short, E., Lewis, B., Satayathum, S., & Queh, D. (2010) The effects of prenatal cocaine exposure on problem behavior in children 4-10 years. *Neurotoxicology and Teratology*, 32, 443-451.
- Mitchell, M.B., Kuczynski, L. (2010). Does anyone know what is going on? Examining children's lived experience of the transition into foster care. *Children and Youth Services Review*, 32, 437-444.
- National Center on Substance Abuse and Child Welfare. (2004b). *May 6 DRAFT, New Child Abuse Prevention and Treatment Act requirements concerning infants identified as affected by illegal substance abuse*. Washington, D.C.: Author Report available from author.
- National Institute on Drug Abuse, National Pregnancy & Health Survey: Drug Use Among Women Delivering Live Births: 1992, National Institute on Drug Abuse, Rockville, 1996, pp. 1-F157.

- Roding, C., Beckwith, L., & Howard, J. (1991). Quality of attachment and home in children prenatally exposed to PCP and cocaine. *Development and Psychopathology*, (3), 351-366.
- Seifer, R., LaGasse, L.L., Lester, B., Bauer, C.R., Shankaran, S., Bada, H.S., Wright, L.L., Smeriglio, V.L., & Liu, J. (2004). Attachment status in children prenatally exposed to cocaine and other substances. *Child Development*, 75(3), 850-868.
- Sheinkopf, S. J., Lester, B.M., LaGasse, L. L., Seifer, R., Bauer, C. R., Shankaran, S., et al. April 6, 2005. Interactions between maternal characteristics and neonatal behavior in the prediction of parenting stress and perception of infant temperament. *Journal of Pediatric Psychology*, doi: 10.1093/jpepsy/jsj026.
- Singer, L. T., Arendt, R., Minnes, S., Farkas, K., Salvator, A., Kirchner, H.L., et al. (2002). Cognitive and motor outcomes of cocaine-exposed infants. *JAMA*, 287(15), 1952-1960.
- Smith, L.M., Paz, M.S., LaGasse, L.L., Derauf, C., Newman, E., Shaw, R., ... Lester, B.M. (2012). Maternal depression and prenatal exposure to methamphetamine: Neurodevelopmental findings from the infant development, environment, and lifestyle (IDEAL) study. *Depression and Anxiety*, 29, 515-522.
- Stacks, A. M., Partridge, T. (2011). Infants placed in foster care prior to their first birthday: Differences in kin and nonkin placements. *Infant Mental Health Journal*, 32(5), 489-508.
- Sterne, A. C., & Smith, G. D. (2001). Sifting the evidence—what’s wrong with significance tests? *Journal of the American Physical Therapy Association*, 81, 1464-1469.
- Strijker, J., Knorth, E.J., Knot-Dickscheit, J. (2008). Placement history of foster children: A study of placement history and outcomes in long-term family foster care. *Child Welfare: Journal of Policy, Practice, and Program*, 87 (5), 107-124.

- Substance Abuse and Mental Health Services Administration (2008, September). Results from the 2007 National Survey on Drug Use and Health (DHHS Publication No. SMA 08-4343). Rockville, MD: Author.
- Twomey, J. E., & Lester, B. M. (2007). How permanent is permanent placement for substance-exposed infants? *Zero To Three*, 27 (4), 41-48.
- Twomey, J. E., Caldwell, D., Soave, R., Fontaine, L.A., & Lester, B. M. (2010). The vulnerable infants program of Rhode Island: Promoting permanency for substance-exposed infants. *Child Welfare*, 89, 121-142.
- Twomey, J. E., Miller-Loncar, C., Hinckley, M., Lester, B. M. (2010) After family treatment drug court: Maternal, infant, and permanency outcomes. *Child Welfare*, 89, 23-41.
- Van Ijzendoorn, M. H., Schuengel, C., Bakermans-Kranenburg, M.J. (1999). Disorganized attachment in early childhood: Meta-analysis of precursors, concomitants, and sequelae. *Development and Psychopathology*, 11, 225-249.
- Van Ijzendoorn, M. H., Vereijken, C. M. J. L., Bekermans-Kranenburg, M.J., & Riksen-Walraven, M.J. (2004). Assessing attachment security with the Attachment Q-Sort: Meta-analytic evidence for the validity of the observer AQS. *Child Development*, 75 (4) 1188-1213.
- Waters, E., & Deane, K. (1985). Defining and assessing individual differences in attachment relationships: Q- methodology and the organization of behavior in infancy and early childhood. In I. Bretherton & E. Waters (Eds.), *Growing Points of Attachment theory and research. Monographs of the Society for Research in Child Development*, 50 (209), 41-65.

- Webster, D., Barth, R. P., Needell, B. (2000). Placement stability for children in out-of-home care: A longitudinal analysis. *Child Welfare, LXIX*, 614-632.
- Wilhelm, P. A. (2002). Permanency at What Cost-Five Years of Imprudence under the Adoption and Safe Families Act of 1997. *Notre Dame Journal of Law, Ethics, & Public Policy*, 16, 617-647
- Worcel, S. D., Furrer, C. J., Green, B. L., Burrus, S.W., Finigan, M. W. (2008). Effects of Family Treatment Drug Courts on Substance Abuse and Child Welfare Outcomes. *Child Abuse Review*, 17, 427-443.
- Zeanah, C. H., Shauffer, C., Dozier, M. (2011). Foster care for young children: Why it must be developmentally informed. *Journal of the American Academy of Child and Adolescent Psychiatry*, 50(12), 1199-1201.

Appendix A

Interview Questions

1. I will provide some background information about this study and present my findings. After this, I will ask your reactions to the presented information
 - a. This study utilized an archived database of concerning prenatally substance-exposed infants who received services through the Family and Treatment Drug Court and were monitored and assessed every six months. My study looks at aspects of their caregiver placement and Attachment as measured by the Attachment Q-Sort (AQS) at 30 months.
 - b. Finding 1: Number of placement transitions has a weak and nonsignificant correlation with AQS
 - c. Finding 2: Of the children in the study that were displaced, those placed into kinship foster care appeared to have higher attachment security scores despite having multiple placements; although, to a nonsignificant degree
2. In your experience, what other factors promote positive outcomes of infants in the Child Welfare System?

Appendix B

Figure 1

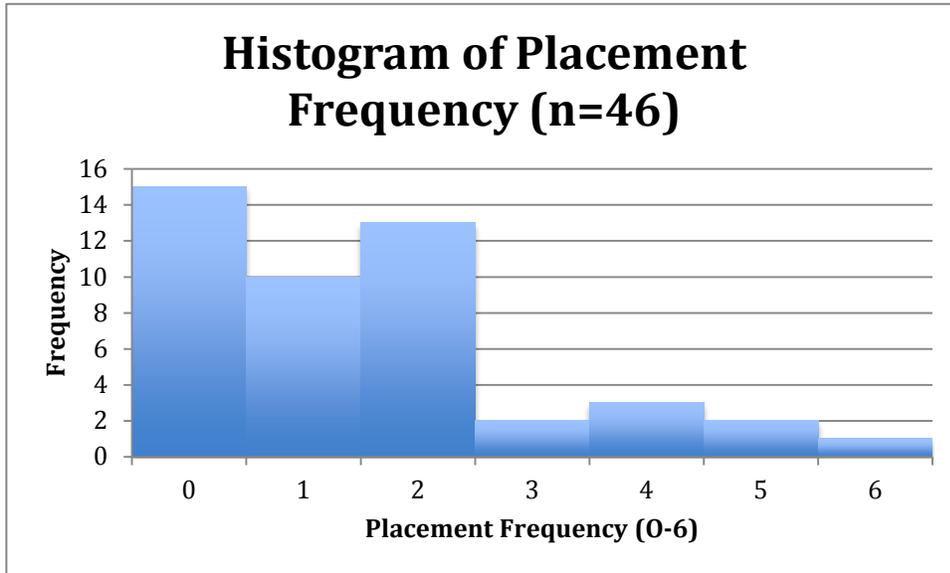


Figure 2

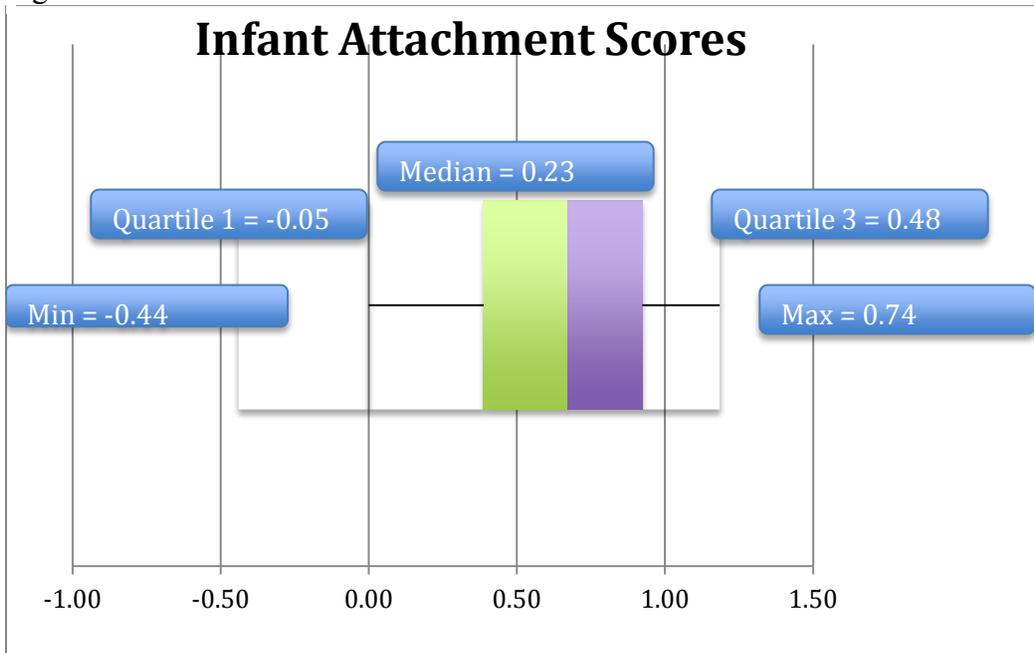


Figure 3

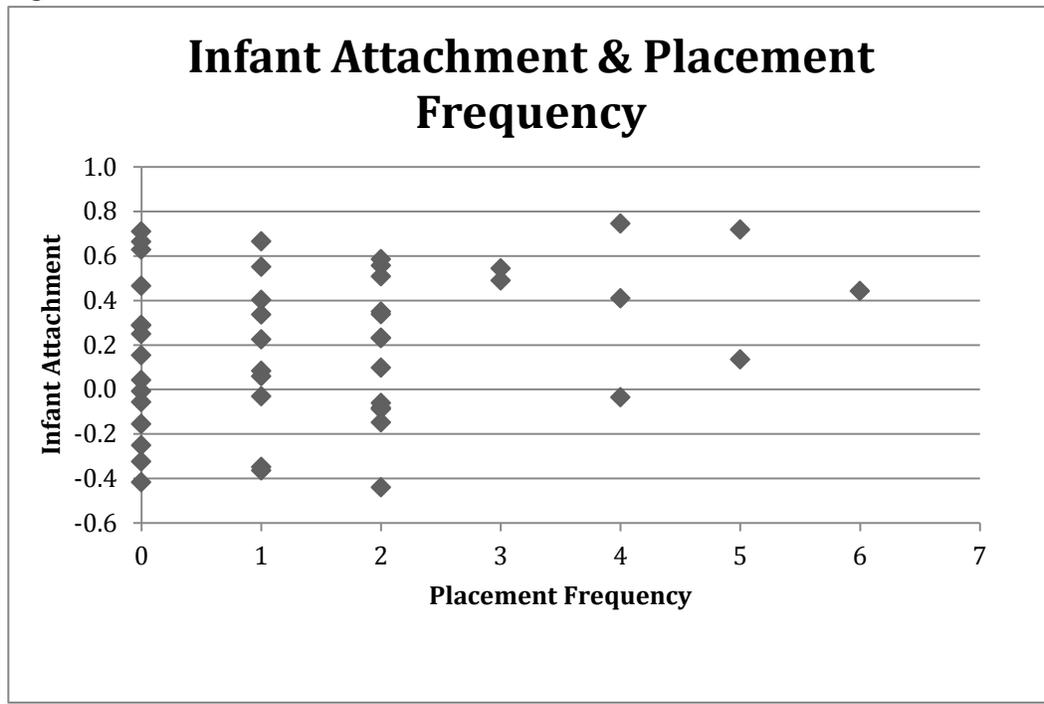
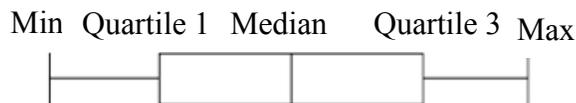


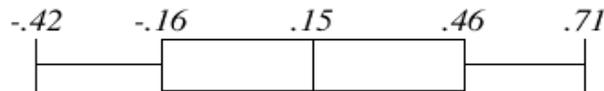
Figure 4

Infant Attachment of Placement Frequency Groups

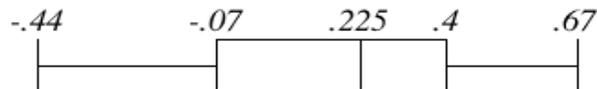
Example Key:



Group 1: 0 Placements



Group 2: 1-2 Placements



Group 3: 3+ Placements

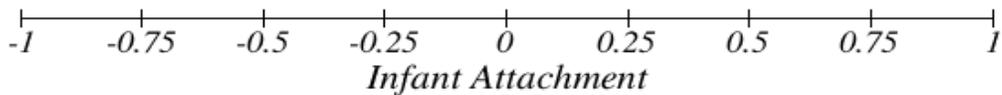
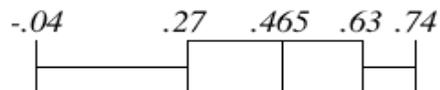
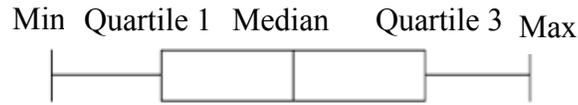


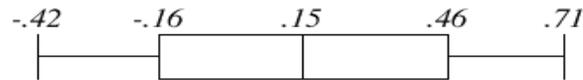
Figure 5

Infant Attachment of Placement Type Groups

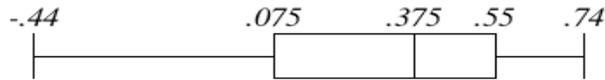
Example Key:



Biological Parents



Kinship Foster Care



Traditional Foster Care

